REMARKS

The Examiner is thanked for the thorough review and consideration of the present application. The final Office Action dated October 27, 2003 has been received and its contents carefully reviewed.

By this Response, claims 1, 5, 10 and 13 have been amended, and claim 8 has been cancelled without prejudice or disclaimer of the subject matter recited therein. No new matter has been added. Claims 1-7 and 9-20 are pending with claims 4, 7, 9 and 16-20 being withdrawn from consideration. Reconsideration and withdrawal of the objection and rejections based upon the above amendments and the following remarks are requested.

In the Office Action, claim 10 is objected to because of an informalities. Applicants have amended claim 10 to correct a minor typographical error. Accordingly, the objection is overcome.

In the Office Action, claims 1-3, 5, 6 and 9 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Office Action rejected claim 1 because of the newly added limitation "to maintain an electric field generated between the common electrodes and the data electrodes in the same direction as the rubbing direction". Applicants have amended claim 1. Reconsideration and withdrawal of the rejection are requested.

Claims 1, 2, 5, 6, 8 and 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6, 281, 958, issued to Nakajima, and U.S. Patent No. 6, 341, 003, issued to Ashizawa et al (hereafter "Ashizawa"). Claim 8 has been cancelled. Thus, the rejection, as applied to cancelled claim 8, is rendered moot. Applicants traverse the rejection because neither Nakajima nor Ashizawa teach or suggest each of the features recited in the claims of the present application. In particular, Nakajima and Ashizawa fail to teach or suggest an in-plane switching mode LCD device in which:

> "the data electrodes are connected with the thin film transistor at one side and edges of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded, as recited in independent claim 1; and

> "a plurality of data electrodes parallel to the common electrodes, wherein first ends of the data electrodes are connected to the drain electrode of said thin film transistor, second ends of the data electrodes are located on an inner portion of the common line, wherein edges of the data electrodes located away from the common line are rounded in a same direction as a rubbing direction, and wherein the data electrodes and the common electrodes form an alternating pattern", as recited in independent claim 10.

In Nakajima, "the pixel electrode 10 is connected with the source line 9 via the TFT which is formed on the gate line 1" and "in a portion in which the pixel electrode 10 overlaps the common line 2, as indicated by "c" in FIG. 1, the pixel electrode 10 is formed so as to cover one end of the common line 2" (see, col. 6, lines 8-10 and lines 52-55). Moreover, in Nakajima, "the display section 47 in which one end of the common line 32 is covered with the pixel electrode 40 and (b) the display section 47 in which the end of the common line 32 is exposed without being covered with the pixel electrode 40, are alternately arranged in the direction orthogonal to and in parallel with the gate line 31" (col. 9, lines 33-38). However, Nakajima fails to teach or suggest "edges of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded", as recited in independent claim 1, and "second ends of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away form the common line are rounded in a same direction as a rubbing direction", as recited in independent claim 10.

Ashizawa discloses a structure having a "cross-shaped pixel electrode" that has "branches extending from the crossing so as to overlap the counter voltage signal line" (col. 19, lines 50-53, FIGS. 14(a) and 16). And, "the counter voltage signal line CL is located approximately at the center of the opening (pixel region)" (col. 22, lines 11-12). However, Ashizawa fails to teach or suggest "edges of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded", as recited in independent claim 1, and "second ends of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded in a same direction as a rubbing direction", as recited in independent claim 10.

Because Nakajima and Ashizawa fail to teach or suggest each of the features recited in the claims of the present application, rejected claim 1 and its rejected dependent claims 2, 5 and 6, and rejected claim 10 and its rejected claims 11-12 are patentable over Nakajima and Ashizawa. Reconsideration and withdrawal of the rejections are requested.

Dependent claims 3 and 11-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakajima in view of Applicants' Related Art. Claim 3 depends from independent claim 1, and claims 11-15 depend from independent claim 10. Applicants have discussed above the deficiencies of Nakajima with regard to independent claims 1 and 10. In particular, neither Nakajima nor the Related Art, analyzed alone or in any combination, teach or suggest an in-plane switching liquid crystal display device that include, among other features:

> "the data electrodes are connected with the thin film transistor at one side and edges of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded", as recited in independent claim 1; and
>
> "a plurality of data electrodes parallel to the common electrodes, wherein first ends of the data electrodes are connected to the drain electrode of said thin film transistor, second ends of the data electrodes are located on an inner portion of the common line, wherein edges of the data electrodes located away from the common line are rounded in a same direction as a rubbing direction, and wherein the data electrodes and the common electrodes form an alternating pattern", as recited in independent claim 10.

The Office Action concedes that Nakajima fails to teach "one side of the first data electrode" connected with the transistor "and also over the common line". To remedy the deficient teachings of Nakajima, the Office Action relies upon the Related Art. However, Applicant respectfully submits the Related Art fails to "edges of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded" as recited in independent claim 1, and "second ends of the data electrodes are located on an inner portion of the common line wherein edges of the data electrodes located away from the common line are rounded in a same direction as a rubbing direction", as recited in independent claim 10.

Because the Related Art fails to teach at least these features of claims 1 and 10, the Related Art does not remedy the deficiencies of Nakajima. Accordingly, claims 3 and 11-15, by virtue of their dependence from claims 1 and 10 , respectively, are patentable over Nakajima and the Related Art. Reconsideration and withdrawal of the rejection are requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding objection and rejections of the claims and to pass this application to issue. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

Dated: January 21, 2004

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